

IN THE CLAIMS

Please cancel Claims 6-10 and 14-15 without prejudice:

1. (Previously Presented) A multiplexer circuit for switching a selected one of a plurality of current inputs carried by respective input lines to a common output, said circuit comprising, for each respective input line:

a diode clamp including first and second clamp terminals and first and second clamp diodes arranged in series with the same polarity between said clamp terminals; and

isolation means provided between each respective input line and said common output,

wherein each input line is connected only to the isolation means and to a point between said first and second clamp diodes, and

wherein said diode clamp is operable in two modes, a first mode in which voltages are applied to said clamp terminals such that said diodes of said diode clamp are forward biased and hold said input line at a first voltage which prevents a passage of current from said input line to said common output, and a second mode in which the voltages are applied to said clamp terminals such that said diodes of said diode clamp are reverse biased and said passage of said current from said input line to said common output is allowed, and

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wherein only two connections to the diode clamp control switching of the respective input line.

2. (Previously Presented) The multiplexer circuit of claim 1, wherein said isolation means has an isolation diode.

3. (Previously Presented) The multiplexer circuit of claim 2, wherein said first voltage is selected to reverse bias said isolation diode, thereby preventing said passage of current from said respective input line to said common output.

4. (Previously Presented) The multiplexer circuit of claim 1, wherein said isolation means has a capacitor.

5. (Previously Presented) The multiplexer circuit of claim 4, wherein said first voltage is selected depending on a source of an input current, such as to prevent current flowing from said source of said input current.

6-10 (Cancelled)

11. (Previously Presented) An electric device comprising:  
an array of charge storage elements that are arranged in rows and columns and which are coupled to row and column conductors,

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said column conductors being arranged in at least one group, each group having a respective common output; a multiplexer circuit for switching a selected one of a plurality of current inputs carried by respective input lines to said common output, said multiplexer circuit having, for each input line, a diode clamp with first and second clamp terminals and first and second clamp diodes arranged in series with the same polarity between said clamp terminals; and isolation means between each input line and said common output, wherein each input line is connected to the isolation means and to a point between said first and second clamp diodes, and wherein said diode clamp operates in a first mode in which voltages are applied to the clamp terminals such that said diodes of said diode clamp are forward biased and hold a first voltage that prevents the passage of current from said input line to said common output, and a second mode in which said diodes of said diode clamp are reverse biased allowing for the passage of a current from said input line to said common output, said multiplexer circuit couples said column conductors of said respective groups to said respective common output; and a charge measurement device that measures a flow of charge from said common output, wherein said charge storage elements comprise capacitive pixels having two diodes and a variable capacitor, the current measurement being used to determine the capacitance.

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12. (Previously Presented) The electronic device of claim 11,  
wherein said isolation means has an isolation diode.

13. (Previously Presented) The electronic device of claim 11,  
wherein said pixels have capacitive fingerprint sensing elements  
in which the capacitance of said variable capacitor is  
determined by a fingerprint portion overlying a pixel.

14-15 (Cancelled)

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